DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024646
Date Inspected: 24-Jun-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder & Tower

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the multi-pass fillet welding. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW), Flux Cored Arc Welding (FCAW) and the Submerged Arc Welding (SAW) processes.

A). OBG Field Splice E11/E12

The QAI observed the Submerged Arc Welding (SAW) process of the deck plate field splice identified as WN: 11E-2E-A1 through A5. The welding was performed by the welder/operators James Zhen ID-6001 and Todd Jackson ID-4639 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1 Rev. 0. The WPS was also used by the QC Inspector Fred Von Hoff to monitor the CJP welding, verify the welding parameters, the minimum preheat and the maximum interpass temperatures. The welding and the inspection of the welding appeared to comply with the contract specifications.

B). North Tower Shaft/ Splice Plates

The QAI observed the continued multi-pass fillet welding of the north and northeast corner splice plates located at the 114 meter elevation and identified as WN: 165 and 166. The welding was performed by Xiao Jian Wan ID-9677 and Salvador Sandavol ID-2202 utilizing the FCAW process as per the WPS identified as ABF-WPS-D15-F2200-3, Rev. 0 and F2200-2, Rev. 0. The WPS's were also used by the QC inspector, Steve

Jensen, to monitor the welding and to verify the welding parameters. The welding and the inspection of the splice plates appeared to comply with the contract specifications.

C). Lifting Lug Holes

The QAI observed the CJP welding of the lifting lug holes identified as WN: 9E-PP77-E4, W1& W3. The welding was performed by Jorge Lopez ID-6149 utilizing the WPS identified as ABF-WPS-D15-1050A-CU, Rev. 0. The QAI also observed the QC inspector perform the visual inspection and verify the welding parameters during the production welding. The inspection's performed by Fred Von Hoff appeared to comply with the contract specifications. The welding of these weld joints was not completed during this scheduled shift.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the flat and overhead positions utilizing the E7018-H4R low hydrogen, E71T-1 and EM12K consumables. The 3.2 mm and 4.0 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs below illustrate some of the work observed during this scheduled shift.

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for

your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer